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Essay Review / Essai critique

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In a reflection published in 1994, Maury Klein, a perceptive and influential practitioner of academic railway history, observed that his field suffered from fragmentation common to others.¹ But this historiography also displayed two particular shortcomings. First, scholars passed over depositories filled with unexamined primary sources to mine repeatedly a few well organized and easily accessed collections. Second, many academics still accepted, if they did not champion, a version of the captain of industry-robber baron dichotomy that has informed political and popular debate on railroads in North America since the 1880s. The influential analysis of A. D. Chandler, Jr., concerning the railroads' role in the rise of American managerial capitalism represented an important innovation in the historiography, but *The Visible Hand* was not broad

¹ Maury Klein, "The Unfinished Business of American Railroad History," in *Unfinished Business: The Railroad in American Life* (Hanover, NH: University Press of New England, 1994), 166–86.

enough to support a general history.² Thus, the narrow scholarly horizon, as well as the cramped research base, left too much of the railway experience in North America for interpretation solely by railfans, the amateur enthusiasts whose many compendia reiterate select data but do not normally analyze them. Almost a decade later, Klein's remarks are still pertinent, but there has been movement. The five titles discussed below—a textbook, three monographs, and a collection of photographs—indicate that for the technical as well as the business side of railway history, both the research base and the horizon of some academics has expanded.

There is, at present, no synthesis of the development of railways in Canada. But historical geographer D. W. Meinig's magisterial account of the spatial evolution of the United States, *The Shaping Of America*, contains an incisive overview of railroad development, elements of which might serve as part of a synthesis. In the third volume of the work, appropriately subtitled *Transcontinental America*, the author deals with the incorporation into the expanding American state of a host of separate regions in the West. The prime agent in the linking of these American domains, as Meinig provocatively labels them, to the north-eastern core was the railroads. Within each domain, the geographer treats railroad penetration, expansion, and conflict with a sure hand. In the Pacific Northwest, for example, he deftly weaves the rivalry of the Northern Pacific and the Great Northern into the creation of a second commercial focus, Puget Sound.

What distinguishes Meinig's treatment of railroads is its break from much of the historiography that Klein laments. The opening chapter deals largely with the creation of the first transcontinental, the Union Pacific-Central Pacific, but the author forsakes the traditional triumphalist saga of its construction for a fascinating discussion of the politics of its location, in particular, the sectional dispute concerning the location of its eastern terminus. Only the Civil War and the elimination of Southern interests in Congress allowed the federal government in 1862 to settle on a terminus in Iowa. Even so, the handful of alternative termini that the government also authorized threatened to dissipate the "great artery" to a "sprinkler," according to a contemporary (p. 17).

More clearly than any other writer, Meinig demonstrates that the American transcontinental was nothing of the literal sort. In American railroading, the term itself denotes solely a line from the Mississippi to

2 A. D. Chandler, Jr., *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass.: Belknap Press, 1977). For a detailed reappraisal of Chandler's ideas concerning railways, see G. Channon, *Railways in Britain and the United States, 1830–1940: Studies in Economic and Business History* (Aldershot, UK: Ashgate, 2001), 1–21.

the Pacific coast. The transcontinental was only the western, if longest, leg of an articulated rail connection of eastern trunk and Midwest granger lines that eventually linked the American coasts. A brief discussion of some of the inherent inefficiencies in this jointed railnet puts paid to any notion of the "system" as an expression of corporate rationality. While Meinig does not explicitly challenge Chandler's ideas, he offers a strong exposition of the conflict/military model of railroad growth deployed by Klein and others.

He also essays a brief account of Canadian railway development, but these few pages are hived off from the American discussion in a separate section on Canada. Meinig maintains that the spatial evolution of Canada was a response to American continentalism, and this resulted in significant differences in the pattern of railway development, perhaps most evident in the creation of a literal transcontinental in the Canadian Pacific Railway (CPR), a single system from coast to coast. But he observes that "some of the Canadian [rail] networks developed under broadly similar conditions [to American ones]" (p. 260). Thus, he regards the creation and extension of the Grand Trunk Railway in the 1850s from Montreal to Sarnia and Portland, Maine, as the growth of a typical trunk line within the American core. And other aspects of the American pattern resonate in Canadian development. The CPR took on part of the configuration of an articulated American coast-to-coast line when it acquired the granger Soo Line south of Lake Superior. The senseless duplication within the second and third Canadian transcontinental systems suggests that Canadian managers and politicians accepted and practised the wasteful and frequently self-destructive corporate warfare waged by American roads.

This work displays the limitations of a textbook. Only quotations, most often from primary sources, are acknowledged in the notes, and the bibliography, divided annoyingly into chapters, is not systematic for relevant works concerning railroads. Thus, it is sometimes difficult to discern Meinig's debts to and disagreements with other scholars. One should not expect the documentation of a monograph in a textbook, however, and the author's achievement in his chosen mode is substantial.

The intent of the Canada Pacific Railway Company, the first CPR chartered by John A. Macdonald's government in 1872, to build an American-style articulated system to the Pacific coast, is the subject of a chapter in A. A. den Otter's monograph, *The Philosophy of Railways: The Transcontinental Idea in British North America*. The author presents a strong case that the prime minister was cognizant of and tacitly accepted the company's plan to create a granger leg in its system south of Lake Superior. That the prime motive for Macdonald's initial acquiescence in the scheme was simple recognition of established business

practice supports Meinig's general contention concerning transcontinentals.

The author's revisionist reading of these events that ultimately led to the Pacific Scandal is part of an investigation of a series of railway development debates in British North America. What ties these sometimes disparate disputes from the 1840s through the 1870s together, den Otter contends, is the philosophy of railways, "the remarkable political consensus that prompted Canadians to build more railways per capita than any other country in the world" (p. 13). Through assiduous mining of the papers of a gallery of politicians as well as legislative debates and reports, the author illuminates other expressions of this viewpoint in chapters concerning the Guarantee Act, the Grand Trunk, and the National Policy. One of the strengths of this book is its breadth. Extending beyond United Canada and the new Dominion, den Otter probes concurrent railway debates in the colonial assemblies and newspapers of New Brunswick and Nova Scotia. One only wishes that the author had complemented the exploration of "regional" views at the eastern end of a transcontinental that began in central Canada with a consideration of the extensive debate in the Pacific province during the 1870s and 1880s.

I have discussed elsewhere the rationale on which the work rests.³ Let me remark here that den Otter attempts to link his narrative to theory, in this case communications scholar Maurice Charland's concept of technological nationalism. That this link is not entirely successful stems in part from the author's decision to concentrate his discussion of many of the alienating consequences of this "defective" Canadian philosophy in a wide-ranging final chapter that moves away in detail as well as in time from the close analysis in the body of the book.

In *Gentlemen Engineers*, Richard White tracks the careers of brothers Walter and Frank Shanly, Anglo-Irish immigrants to Upper Canada who worked primarily as engineers, but also served as contractors, politicians, and civil servants. He deploys his major source, the Shanly Papers at the Archives of Ontario, to fashion from their working lives a counterpoint to H. V. Nelles' account of Casimir Gzowski in which an engineer became a gentleman.⁴ In the debate on the origins and nature of the engineering profession in Canada, he modestly describes his work as a "'miniature,' a small portrait which, while it may prove nothing, reveals many things" (p. ix-x). Certainly one thing this tightly organized

³ Frank Leonard, book review of *The Philosophy of Railways* by A. A. den Otter, in *American Historical Review* 104 (1999): 173-74.

⁴ H. V. Nelles, "Gzowski, Sir Casimir Stanislaus," in *Dictionary of Canadian Biography*, vol. 12, 1891-1900, ed. F. G. Halpenny and J. Hamelin (Toronto: University of Toronto Press, 1990), 389-396.

work illuminates admirably is several aspects of railway construction in the nineteenth century.

During the period 1852–1856, Walter served as chief engineer and Frank as resident on the location and construction of the Toronto and Guelph Railway, which became the western division of the Grand Trunk. Their correspondence at every step from survey parties through track laying generated “exceptionally rich” papers (p. 62) that allows White to present the most detailed account of construction at the local level in Canada before the CPR. Walter’s decision to divide the project into local units and grant each unit leader a degree of independence played a role in its success, and, as such, anticipated on a very small scale Chandler’s “solution” to the problems that confronted nineteenth-century American railroads.

White supports the standard accounts that claim that the construction of the western division of the Grand Trunk, engineered by the Shanlys, was far superior to sections in the east. One wishes, however, that he had utilized the engineering and financial data in the correspondence to produce a more precise and nuanced conclusion. If the western division was built to higher quality, did it also cost more? The first part of the project from Toronto to Guelph was largely completed when the Shanlys worked as independent engineers for the locally controlled company. On the second leg from Guelph west, they built under the auspices of the Grand Trunk and the tacit direction of the chief contractor, Gzowski and Company. Did the reduction of the Shanlys’ independence as engineers significantly reduce the engineering costs that Gzowski’s partner had earlier decried as “fearfully extravagant” (p. 80)?

The different professional trajectories of the brothers after the completion of the contract warrant more attention. White traces Frank’s activities as a railway contractor on the Hoosac Tunnel and other projects, but does not analyze the contractor’s predicament as surely as the engineer’s. Frank’s lavish spending habits overwhelmed his erratic income from contracts soundly engineered. But the author implies that successful contractors must be corrupt, shoddy, or merciless in labour relations (p. 130). Does this cynical evaluation of management explain the success of Gzowski on the western division contract?

Walter went a different way. He became the leading Canadian manager of the Grand Trunk for four years, a task that most historians overlook because of his “low [...] profile on the historical horizon” (p. 147). But he responded to the most detailed examination of the Grand Trunk’s shortcomings in the 1861 report of the Langton Commission. This matter deserves a greater airing. Surely the manager’s papers illuminate both the origins and the intent of the commission. How was Walter’s “peevish” response to the report received by the London board

of the company? Since Walter was clearly not a leader like engineer-managers Benjamin La Trobe or J. Edgar Thomson, why did the Grand Trunk apparently make such efforts to hold him?

Toward the end of his career, Walter prepared a report on sites for a proposed railway bridge across the St. Lawrence River near Quebec. As W. D. Middleton makes clear in the opening chapter of *The Bridge at Québec*, this was one of a host of plans and designs for a bridge that filled shelves and encouraged speculation in newspapers for fifty years before the federal government finally guaranteed construction of the structure as part of the National Transcontinental in 1903.

Part of an American series, "Railroads Past and Present," the book is a whodunit for engineers, a probe of the greatest bridge disaster in North America. Middleton mines two rich sources, the royal commission investigation of the collapse of the first bridge in 1907 that killed 75 workers, and the voluminous engineers' report that followed the completion of the second bridge in 1917 after a second collapse in 1916 took thirteen lives. To these he has added a stream of articles in professional engineering journals as well as *Scientific American* concerning the plans, construction, and collapses of the bridges. The sometimes opaque prose of his protagonists is enlivened, and frequently illuminated, by a wealth of images concerning not only the construction of the two bridges, but also many of the earlier plans that were not executed. A glossary provides some explanation for most of the technical terms in the text.

The author sees his subject as "a remarkable tale of determination and perseverance in the face of daunting obstacles and tragic failure, ending in the final triumph of the successful completion of one of the world's greatest bridges" (p. vii). This is very much a traditional narrative that examines the actions of a single elite in the creation of the bridge. Engineers alone receive capsule biographies; promoters and politicians, both in the city and the country, are dealt with cursorily; and workers do not appear until they give testimony after the first collapse.

Middleton follows the royal commission in laying the blame for the collapse of the first bridge at the feet of Theodore Cooper, the aging American consulting engineer who did not inspect the bridge site after construction began. Though he expressed concern about engineers' reports of bending chords in August 1907, the first stage of collapse, Cooper did not immediately order a halt to construction until the cause was determined. Less clear is how Cooper and the other engineers tolerated a dead (total structural) weight that increased stress 20% above that estimated in the original specifications. Calls for humility from the professional journals do not explain what appears to be a correctable, as well as critical, oversight.

This is one story, but others deserve inclusion. For much of the book, Middleton ignores the economic foundation of railway construction—that expenditure must be tied to realistic estimates of the resulting income from traffic.⁵ Bleak forecasts of traffic rather than shortcomings in engineering design hindered the generation of capital for the project before 1903. The author admits that the final structure did not produce returns to cover its cost. One might then view it as a typical Canadian white elephant mega-project, financed by government and run by American managers. But Middleton does not consult several of the standard works that would have helped him place the bridge in an appropriate regional and national context. Had he perused G. R. Stevens, *Canadian National Railways*, for example, he might have considered the widespread resentment of Canadian engineers toward the appointment of American engineers at the time, which resulted in another royal commission.⁶

He also does not locate the bridge within an appropriate cultural context. We discover little about the wages and working conditions of the labour force, presumably because the majority worked and communicated in French. How did it respond to the instructions of anglophone engineers and foremen? How were its concerns understood by the managers? Since the author does not read French, a colleague “expertly translated a number of important materials” (p. ix). While the bibliography includes a series of French-language newspapers, this reader located only one note to *Le Soleil*. Perhaps this explains the puzzling failure to elaborate the cause, extent, and resolution of a strike of erection workers just weeks before the first collapse. We hear about this action only in an inspection report to Cooper. Were safety concerns involved?

As Alexander Reford observes in the introduction to *Au rythme du train, 1859–1970*, English has been the language of direction and much communication for the railways in the province. That this handsome mélange of photographs of railway development in Quebec is accessible to both audiences is welcome. Each photo rests on a caption in French; idiomatic and, for the most part, accurate English translations of the captions are found at the back. Only the introduction is in French alone. Drawn largely from the CPR, Canadian National, and Notman collections, most images are reproduced crisply with complete archival designations. In chapters grouped loosely around themes such as labour,

⁵ See, for example, A. M. Wellington, *The Economic Theory of the Location of Railways* (New York: J. Wiley & Sons, 1887), 95; and W. T. Jackman, *Economics of Transportation* (Toronto: University of Toronto Press, 1926), 54.

⁶ G. R. Stevens, *Canadian National Railway*, 2 vol. (Toronto: Clarke, Irwin, 1960–1962).

maintenance, and freight, as well as the more predictable heads on locomotives and rail disasters, they offer a series of windows, some almost unexamined, on Quebec railroading.

By lamenting the lack of photos of strikers in the company collections, Reford implies recognition that many of these photos were contrived. Sometimes he provides context in the caption that facilitates an alternative reading. What better revelation of the foibles of nineteenth-century railway mania than the festive inhabitants of the village of Deschaillions posing in masquerade costume on the first train that tied them to the Grand Trunk rail network (p. 89). But too often his reading adheres to the official one. Thus, the image of a smiling black porter tucking three white children into their berths leads only to a comment that portering was one of the few occupations open to the black minority in Canada (p. 168).

Reford's treatment of an image in which labourers perch on two shiny, flag-bedecked trains in the middle of the Quebec Bridge indicates a different shortcoming. In this photo, the locomotives are poised, and posed, within the centre span of the bridge, which was only lifted successfully into place in September 1917, not "vers 1915" as the author maintains (p. 45). Such a seemingly minor error in dating is not trivial in this case. Since the author declares in the caption that the bridge collapsed a second time in 1916, he should have recognized that the location on the completed structure, as well as the photo, simply did not exist in 1915.

Such insouciance with historical detail is not unique, unfortunately. An intriguing photograph of a large display board of the routes of the Canadian Government Railways from Winnipeg to the Atlantic leads the author to observe that the collapse of the Grand Trunk Pacific and Canadian Northern threatened not only the Bank of Commerce but also the government of Wilfrid Laurier (p. 144). The image does not display these roads, however. And while some documents suggest that the bank's stability was endangered during the war, the government in power was Robert Borden's, not Laurier's.

The commentary for this photo also illustrates perhaps the greatest shortcoming of the book—that too many captions simply distract the reader from examining closely the images themselves. The archival designation of the image indicates that a member of the Notman firm took the photo in 1916 or 1917. The display serves as a mural behind a row of potted plants, four chairs, and two book-laden tables, all meticulously roped off from a carpeted viewing area as in a gallery. A small sign in the rafters above the board indicates that the display was created by Denis Advertising Signs of Montreal. One wishes the author had

provided the location of and reason for a special exhibition of such a huge mural.

This work is not directed toward an academic audience. Thus, it might be argued that it is uncharitable to hold Reford to standards of accuracy applied to the scholarly studies discussed above. But precise description and careful analysis should not be restricted to those who wield footnotes.

Some readers may observe that the works reviewed above also illustrate the conservative inclination of railway historians. While den Otter does engage theory, there is little evidence in this book or the others of an appreciation of a cultural studies perspective. But these books reveal progress from Klein's gloomy appraisal a decade ago. All the monographs and the photograph collection rest on untapped, if not unknown, primary sources. Two monograph authors escape the interpretive dichotomy that has limited so much academic writing. And the textbook offers elements of a new overview. While the historiography of the railway experience has not yet produced a synthesis, it does exhibit, in Meinig's phrase, a degree of articulation.

Biographical Note: Frank Leonard teaches history at Douglas College, New Westminster, British Columbia. He also consults on legal actions concerning the impact of railway development on Indian Reserves. Author of *A Thousand Blunders: The Grand Trunk Pacific Railway and Northern British Columbia* (Vancouver: University of British Columbia Press, 1996), he is completing a comparative study of the activities of Canadian and American railway companies at their respective Pacific termini and adjacent service communities during the period 1870–1930. *Address:* Department of History, Douglas College, Box 2503, New Westminster (British Columbia), Canada V3L 5B2, Canada.